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Volland, Grand Rapids; Director Nathaniel Butler, and Dean F. J. Miller, of the University.

## II. THE CONTEST IN DECLAMATION.

An unusual interest was shown in this contest by the secondary schools, candidates being sent from a wide range of places as follows : from Chicago : the Englewood, Medill, Hyde Park, South Chicago, South Division, Marshall, and Austin High Schools, also Kenwood Institute, South Side Academy, and Morgan Park Academy ; from outside of Chicago : the Elgin, St. Joseph (Mich), Rockford, Joliet Township, Clyde Township, West Aurora, Kansas City (Central), Pueblo (Centennial), Kansas City (Manual Training), Waukegan, Bloomington, and Evanston High Schools, also Bradley Polytechnic Institute, Girl's Classical School (Indianapolis), and Wayland Academy.

The winner of the prize scholarship in the class for girls was Margie Anne Taylor, of the Girls' Classical School ; in the class for boys was Sherwood Fender, of the Kansas City Central High School.

## THE GENERAL CONFERENCE.

The general conference on Saturday morning considered the topic : "Current Problems in Secondary Education." The leading paper in the discussion was presented by Professor John Dewey, of the University. His paper with syllabus follows.

### CURRENT PROBLEMS IN SECONDARY EDUCATION.

I should feel hesitant indeed to come before a body of teachers, engaged in the practical work of teaching, and appear to instruct them regarding the solution of the difficult problems which face them. My task is a more grateful one. It is mine simply to formulate and arrange the difficulties which the current state of discussion shows teachers already to have felt. Those concerned with secondary-school work have realized that their energies must be peculiarly concentrated at certain points; they have found that some problems are so urgent that they must be met and wrestled with. I have tried in the accompanying syllabus to gather together these practical problems and to arrange them in such form as to show their connections with one another ; and by this classification to indicate what seem to me the roots of the difficulty.

- I. *Problems relating to the articulation of the secondary school in the educational system.*
  1. Adjustment to the grades.
    - a) Dropping out of pupils : extent and causes.
    - b) Different sorts of preparation for teachers ; methods of rectifying, etc.
    - c) Abrupt changes of ideals and methods of teaching and discipline.
    - d) Introduction of traditional high-school studies into the upper grades ; the science course, etc.
  2. Adjustment to college.
    - a) Modes of entering college ; examination, certification, etc.
    - b) Varieties of entrance requirements.
    - c) Different problems of public and private high schools.
    - d) Coaching for specific results *vs.* training and method.
- II. *Problems relating to the adjustment of preparation for college to preparation for other pursuits in life.*
  1. Is it true that the same education gives the best preparation for both ?
  2. If so, which shall be taken as the standard for measuring the character of the other ?
  3. If not so, by what principles and along what lines shall the work be differentiated ?
  4. If not so, shall specialized or definite preparation be made for other future callings as well as for the college student ?
- III. *The adjustment of work to the individual.*
  1. The nature and limits of the elective principle as applied to particular subjects, and to courses and groups of subjects.
  2. Acquaintance with the history, environment, and capacity of individuals with reference to assisting in the selection of vocation.
  3. Does the period of adolescence present such peculiarities as to call for marked modifications of present secondary work ?
- IV. *Problems arising from social phases of secondary school work.*
  1. The educational utilization of social organizations : debating, musical, dramatic clubs ; athletics.
  2. School discipline and government in their social aspect.
  3. Relations to the community : the school a social center.
- V. *Preceding problems as affecting the curriculum : conflict of studies and groups of studies.*
  1. The older problem : adjustment of the respective claims of ancient and modern languages, of language and science, of history and social science, civics, economics, etc., of English literature and composition.
  2. The newer problem.
    - a) The place of manual training and technological work.
    - b) The place of fine art.
    - c) Commercial studies.

In what I have to say this morning, I shall make no attempt to go over these points one by one. I shall rather try to set clearly and

briefly before you the reasons which have led me to adopt the classification presented. This will take me into a discussion of the historic and social facts which lie back of the problem, and in the light of which alone I believe these problems can be attacked and solved. If it seems unnecessarily remote to approach school problems through a presentation of what may appear to be simply a form of social philosophy, there is yet practical encouragement in recognizing that exactly the same forces which have thrust these questions into the forefront of school practice are also operative to solve them. For problems do not arise arbitrarily. They come from causes, and from causes which are imbedded in the very structure of the school system—yes, even beyond that, in the structure of society itself. It is for this reason that mere changes in the mechanics of the school system, whether in administration or in the externals of subject-matter, turn out mere temporary devices. Sometimes, when one has made a delicate or elaborate arrangement which seems to him exactly calculated to obviate the difficulties of the situation, one is tempted to accuse his generation as stiff-necked when the scheme does not take—when it does not spread; when, in the language of the biologist, it is not selected. The explanation, however, is not in the hard-heartedness or intellectual blindness of others, but in the fact that any adjustment which really and permanently succeeds within the school walls, must reach out and be an adjustment of forces in the social environment.

A slight amount of social philosophy and social insight reveals two principles continuously at work in all human institutions: one is toward specialization and consequent isolation, the other toward connection and interaction. In the life of the nation we see first a movement toward separation, toward marking off our own life as a people as definitely as possible to avoid its submergence, to secure for it an individuality of its own. Commercially we pursue a policy of protection; in international relations one of having to do as little as possible with other nationalities. That tendency exhausts itself and the pendulum swings in another direction. Reciprocity, the broadening of our business life through increased contacts and wider exchange becomes the commercial watchword. Expansion, taking our place in the sisterhood of nations, making ourselves recognized as a world-power, becomes the formula for international politics. Science shows the same rhythm in its development. A period of specialization—of relative isolation—secures to each set of natural phenomena a chance to develop on its own account, without being lost in, or obscured by

generalities or a mass of details. But the time comes when the limit of movement in this direction is reached, and it is necessary to devote ourselves to tracing the threads of connection which unite the different specialized branches into a coherent and consecutive whole. At present the most active sciences seem to be spelled with a hyphen; it is astro-physics, stereo-chemistry, psycho-physics, and so on.

This is not a movement of blind action and reaction. One tendency is the necessary completion of the other. A certain degree of isolation of detachment is required to secure the unhindered and mature development of any group of forces. It is necessary in order to master them in their practical workings. We have to divide to conquer. But when the proper degree of individualization is reached, we need to bring one thing to bear upon another in order to realize upon the benefits which may be derived from the period of isolation. The sole object of the separation is to serve as a means to the end of more effective interaction.

Now as to the bearings of this abstract piece of philosophy upon our school problems. The school system is a historic evolution. It has a tradition and a movement of its own. Its roots run back into the past and may be traced through the strata of the successive centuries. It has an independence, a dignity of its own comparable to that of any other institution. In this twenty-five-hundred-year-old development it has, of necessity, taken on its individuality at the expense of a certain isolation. Only through this isolation has it been disentangled from absorption in other institutions: the family, the government, the church, and so on. This detachment has been a necessity in order that it might become a true division of labor and thus perform most efficiently the service required of it.

But there are disadvantages as well as advantages. Attention has come to be concentrated upon the affairs of the school system as if they concerned simply the system itself, and had only a very indirect reference to other social institutions. The school-teacher often resents reference to outside contacts and considerations as if they were indeed outside—simply interferences. There can be no doubt that in the last two centuries much more thought and energy have been devoted to shaping the school system into an effective mechanism within itself than to securing its due interaction with family life, the church, commerce, or political institutions.

But, having secured this fairly adequate and efficient machine, the question which is coming more and more to the front is: What shall

we do with it ? How shall we secure from it the services, the fruits, which alone justify the expense of money, time, and thought in building up the machine ?

It is at this point that particular conflicts and problems begin to show themselves. The contemporary demands—the demands that are made in the attempt to secure the proper interaction of the school—are one thing ; the demands that arise out of the working of the school system considered as an independent historical institution are another. Every teacher has to work at detailed problems which arise out of this conflict, whether he is aware of its existence or not, and he is harassed by friction that arises in the conflict of these two great social forces. Men divide along these lines. We find one group instinctively rather than consciously ranging itself about the maintenance of the existing school system, and holding that reforms are to be made along the line of improvement in its present workings. Others are clamorous for more radical changes—the changes that will better adapt the school to contemporary social needs. Needless to say, each group represents a necessary and essential factor in the situation, because each stands for the working of a force which cannot be eliminated.

Let me now try to show how, out of this profound social conflict and necessity of social adjustment, the particular problems arise which I have arranged under five heads in the accompanying syllabus. Our first concern is with the articulation of the high school into the entire educational system. The high school looks towards the grades on one side and toward the college on the other. What are the historic influences which have shaped this intermediate position, and placed peculiar difficulties and responsibilities upon the secondary school ? Briefly put, it is that the elementary school and the college represent distinctly different forces and traditions on the historic side. The elementary school is an outgrowth of the democratic movement in its ethical aspects. Prior to the latter half of the eighteenth century the elementary school was hardly more than a wooden device for instructing little children of the lower classes in some of the utilities of their future callings—the mere rudiments of reading, writing, and number. The democratic upheaval took shape not merely in a demand for political equality, but in a more profound aspiration towards an equality of intellectual and moral opportunity and development. The significance of such an educational writer as Rousseau is not measured by any particular improvement he suggested, or by any par-

ticular extravagances he indulged himself in. His is a voice struggling to express the necessity of a thoroughgoing revolution of elementary education to make it a factor in the intellectual and moral development of all—not a mere device for teaching the use of certain practical tools to those sections of society before whose development a stone wall was placed. What Rousseau as a writer was to the emotions of the France of his day, Horace Mann as a doer was to the practical situation of the United States in his time. He stood, and stood most effectively, for letting the democratic spirit, in all of its ethical significance, into the common elementary schools, and for such a complete reorganization of these schools as would make them the most serviceable possible instruments of human development.

In spite of all the influences which are continually operative to limit the scope and range of elementary education, in spite of the influences which would bring back a reversion to the type of the limited utilitarian school of the seventeenth century, that part of the school system which stands underneath the high school represents this broad democratic movement. To a certain extent, and in many of its phases, the high school is an outgrowth of exactly the same impulse. It has the same history and stands for the same ideals; but only in part. It has also been profoundly shaped by influences having another origin. It represents also the tradition of the learned class. It maintains the tradition of higher culture as a distinct possession of a certain class of society. It embodies the aristocratic ideal. If we cast our eyes back over history we do not find its full meaning summed up in the democratic movement of which I have just spoken. We find the culture of the ancient world coming down to us by a distinct channel. We find the wisdom and enlightenment of the past conserved and handed on by a distinct class located almost entirely in the colleges, and in the higher academies which are to all intents and purposes the outgrowth of the colleges. We find that our high school has been quite as persistently molded and directed through the agencies which have been concerned with keeping alive and passing on the treasure of learning, as through the democratic influences which have surged up from below. The existing high school, in a word, is the product of the meeting of these two forces, and upon it more than upon any other part of the school system is placed the responsibility of making an adjustment.

I do not mention the tradition of learning kept up in the universities of the Middle Ages and the higher schools of the Renaissance,

and refer to it as aristocratic for the sake of disparaging it. Eternal vigilance is the price of liberty, and eternal care and nurture are the price of maintaining the precious conquest of the past—of preventing a relapse in Philistinism, that combination of superficial enlightenment and dogmatic crudity. If it were not for the work of an aristocracy in the past, there would be but little worth conferring upon the democracy of today.

There are not in reality two problems of articulation for the high school—one as regards the grades and the other as regards the college. There is at bottom but one problem—that of adjusting the demand for an adequate training of the masses of mankind to the conservation and use of that higher learning which is the primary and essential concern of a smaller number—of a minority. Of course, elementary school and college alike are affected by the same problem. Part of the work of the grades today is precisely the enrichment of its traditional meager and materialistic curriculum with something of that spirit and wealth of intelligence that are the product of the higher schools. And one of the problems of the college is precisely to make its store of learning more available to the masses, make it count for more in the everyday life.

But the high school is the connecting link, and it must bear the brunt. Unless I am a false prophet, we shall soon see the same thoughtful attention which for the past fifteen years has characterized discussion of the relation of high school and college, speedily transferring itself over to the problem of a more organic and vital relation between the high school and the grades. The solution of this problem is important in order that the democratic movement may not be abortively arrested—in order that it may have its full sweep. But it is equally important for the sake of the college and in the interests of higher learning. The arbitrary hiatus which exists at present reacts as unfavorably in one direction as in the other.

First, it limits the constituency of the college; it lessens the actual numbers of those who are awakened to the opportunities before them, and directed towards the college doors. Secondly, it restricts the sphere of those who sympathetically and vicariously feel the influence of the college, and are thus led to feel that what concerns the welfare of the college is of direct concern to them. The attitude of the mass of the people today towards the college is one of curiosity displaying itself from afar rather than of immediate interest. Indeed, it sometimes would seem that only athletic exhibitions form a direct line of



connection between the college and the average community life. In the third place it tends to erect dams which prevent the stream of teachers flowing from the college walls from seeking or finding congenial service in the grades, and thereby tends automatically to perpetuate whatever narrowness of horizon or paucity of resource is characteristic of the elementary school. Fourth, it operates to isolate the college in its working relations to life, and thereby to hinder it from rendering its normal service to society.

I pass on now to the second main line of problems—that having to do with preparation for college on one side, and for life on the other. Ultimately this is not a different problem, but simply another outgrowth of the same question. A few years ago a happy formula was current: the proposition that the best preparation for college was also the best preparation for life. The formula was such a happy one that if formulæ ever really disposed of any practical difficulty, there would be no longer any problem to discuss. But I seem to observe that this proposition is not heard so frequently as formerly; and, indeed, that since it was uttered things seem to be taking their own course much as before.

The inefficiency of the formula lies in its ambiguity. It throws no light on the fundamental problem of Which is Which? Is it preparation for college which sets the standard for preparation for life, or is it preparation for life which affords the proper criterion of adequate preparation for college? Is the high-school course to be planned primarily with reference to meeting the needs of those who go to college, on the assumption that this will also serve best the needs of those who go into other callings in life? Or, shall the high school devote its energies to preparing all its members for life in more comprehensive sense, and permit the college to select its entrance requirements on the basis of work thus done?

I shall not attempt to solve this problem, and for a very good reason. I believe that there are forces inherent in the situation itself which are working out an inevitable solution. Every step in the more rational development of both high school and college, without any reference to their relationships to each other bring the two more closely together. I am optimistic enough to believe that we are much nearer a solution of this vexed question than we generally dare believe. Quite independent of any question of entrance requirements, or of high-school preparation, the college is undergoing a very marked development, and even transformation, on its own account. I refer to

such developments within the college course as the introduction not only of the Ph. B. and B. S. courses side by side with the older classical courses, but also to the forward movement in the direction of a specific group of commercial and social studies; and to the tendency of all universities of broad scope to maintain technological schools. I refer also to the tendency to adapt the college work more and more to preparation for specific vocations in life. Practically all the larger colleges of the country now have a definite arrangement by which at least one year of the undergraduate course counts equally in the professional course of law, medicine, or divinity as the case may be. Now, when these two movements have reached their fruition, and the high school has worked out on its own account the broadening of its own curriculum, I believe we shall find that the high school and the college have arrived at a common point. The college course will be so broad and varied that it will be entirely feasible to take any judicious group of studies from any well organized and well managed high school, and accept them as preparation for college. It has been the narrowness of the traditional college curriculum on one side, and the inadequacy of the content of high-school work on the other, which have caused a large part of our mutual embarrassments.

I must run rapidly over the problems referred to under my third and fourth main heads—those having to do with adjustment to individual needs, and to the social uses of the school. I take it that these illustrate just the same general principle we have been already discussing. The school has a tradition not only regarding its position in the educational system as a whole, and not only as regards its proper curriculum, but also as regards the methods and ideals of discipline and administration in relation to its students.

There can be no doubt that many of these traditions are out of alignment with the general trend of events outside the school walls—that in some cases the discrepancy is so great that the high-school tradition cuts abruptly across this outside stream. One of these influences is found in the tendency equally marked in the family, church, and state, to relax the bonds of purely external authority, to give more play to individual powers, to require of the individual more personal initiative, and to exact of him a more personal accountability. There may be difference of opinion as to the degree in which the school should yield to this tendency, or should strive to counteract it, or should endeavor to utilize and direct it. There can be no difference of opinion, however, as to the necessity of a more persistent and adequate

study of the individual as regards his history, environment, predominant tastes and capacities, and special needs—and please note that I say needs as well as tastes. I do not think there can be any difference of opinion as to the necessity of a more careful study of the effect of particular school studies upon the normal growth of the individual, and of the means by which they shall be made a more effective means of connection between the present powers of the individual and his future career. Just the limits of this principle, and its bearings upon such problems as the introduction of electives, I shall not take up. We have no time for a detailed discussion of these disputed points. As I have just indicated, however, I do not see how there can be dispute as to the fact that the individual has assumed such a position as to require more positive consideration and attention as an individual, and a correspondingly different mode of treatment. I cannot leave the topic, however, without stating that here also I believe the ultimate solution will be found, not along the line of mechanical devices as to election or non-election, but rather through the more continued and serious study of the individual in both his psychological make up and his social relations.

I have reserved the group of problems bearing upon the formation of a curriculum until the last. From the practical side, however, we probably find here the problems which confront the average teacher most urgently and persistently. This, I take it, is because all the other influences impinge at this point. The problem of just what time is to be given respectively to mathematics, and classics, and modern languages, and history, and English, and the sciences—physical, biological—is one the high-school teacher has always with him. To adjust the respective claims of the different studies and get a result which is at once harmonious and workable, is a task which almost defies human capacity. The problem, however, is not a separate problem. It is so pressing just because it is at this point that all the other forces meet. The adjustment of studies, and courses of study, is the ground upon which the practical solution and working adjustment of all other problems must be sought and found. It is as an effect of other deep-lying and far-reaching historic and social causes that the conflict of studies is to be treated.

There is one matter constantly accompanying any practical problem which at first sight is extremely discouraging. Before we get our older problems worked out to any degree of satisfaction, new and greater problems are upon us, threatening to overwhelm us. Such is the

present educational situation. It would seem as if the question of adjusting the conflicts already referred to, which have so taxed the time and energy of high-school teachers for the past generation, were quite enough. But no; before we have arrived at anything approaching consensus of opinion, the larger city schools at least find the conflict raging in a new spot—still other studies and lines of study are demanding recognition. We have the uprearing of the commercial high school; of the manual-training high school.

At first the difficulty of the problem was avoided or evaded, because distinct and separate high schools were erected to meet these purposes. The current now seems to be in the other direction. A generation ago it was practically necessary to isolate the manual-training course of study in order that it might receive due attention, and be worked out under fairly favorable influences. Fifteen years ago the same was essentially true of the commercial courses. Now, however, there are many signs of the times indicating that the situation is ripe for interaction—the problem is now the introduction of manual-training and commercial courses as integral and organic parts of a city high school. Demands are also made for the introduction of more work in the line of fine art, drawing, music, and the application of design to industry; and for the introduction of a larger number of specifically sociological studies—this independent of those studies which naturally form a part of the so-called commercial course.

At first sight, as just intimated, the introduction of these new difficulties before we are half way through our old ones, is exceedingly distressing. But more than once the longest way around has proved the shortest way home. When new problems emerge, it must mean, after all, that certain essential conditions of the old problem had been ignored, and consequently that any solution reached simply in terms of the recognized factors would have been partial and temporary. I am inclined to think that in the present case the introduction of these new problems will ultimately prove enlightening rather than confusing. They serve to generalize the older problems, and to make their factors stand out in clearer relief.

In the future it is going to be less and less a matter of worrying over the respective merits of the ancient and modern languages; or of the inherent values of scientific *vs.* humanistic study, and more a question of discovering and observing certain broader lines of cleavage, which affect equally the disposition and power of the individual, and the social callings for which education ought to prepare the individual.

It will be, in my judgment, less and less a question of piecing together certain studies in a more or less mechanical way in order to make out a so-called course of study running through a certain number of years; and more and more a question of grouping studies together according to their natural mutual affinities and reinforcements for the securing of certain well-marked ends.

For this reason I welcome the introduction into the arena of discussion, of the question of providing courses in commerce and sociology, in the fine and applied arts, and in technological training. I think henceforth certain fundamental issues will stand out more clearly and have to be met upon a wider basis and dealt with on a wider scale. As I see the matter, this change will require the concentration of attention upon these two points: first, what groups of studies will most serviceably recognize the typical divisions of labor, the typical callings in society, callings which are absolutely indispensable to the spiritual as well as to the material ends of society; and, secondly, not to do detriment to the real culture of the individual, or, if this seems too negative a statement, to secure for him the full use and control of his own powers. From this point of view, I think that certain of the problems just referred to, as, for instance, the conflict of language and science, will be put in a new perspective, will be capable of approach from a different angle; and that because of this new approach many of the knotty problems which have embarrassed us in the past will disappear.

Permit me to repeat in a somewhat more explicit way the benefits which I expect to flow from the expansion of the regular high school in making room for commercial, manual, and æsthetic studies. In the first place, it will provide for the recognition and the representation of all the typical occupations that are found in society. Thus it will make the working relationship between the secondary school and life a free and all around one. It will complete the circuit—it will round out the present series of segmental arcs into a whole. Now this fact will put all the school studies in a new light. They can be looked at in the place they normally occupy in the whole circle of human activities. As long as social values and aims are only partially represented in the school, it is not possible to employ the standard of social value in a complete way. A continual angle of refraction and distortion is introduced in viewing existing studies, through the fact that they are looked at from an artificial standpoint. Even those studies which are popularly regarded as preparing distinctively for life rather than for

college cannot get their full meaning, cannot be judged correctly, until the life for which they are said to be a preparation receives a fuller and more balanced representation in the school. While, on the other hand, the more scholastic studies, if I may use the expression, cannot relate themselves properly so long as the branches which give them their ultimate *raison d'être* and sphere of application in the whole of life are non-existent in the curriculum.

For a certain type of mind algebra and geometry are their own justification. They appeal to such students for the intellectual satisfaction they supply, and as preparation for the play of the intellect in further studies. But to another type of mind these studies are relatively dead and meaningless until surrounded with a context of obvious bearings—such as furnished in manual-training studies. The latter, however, are rendered unduly utilitarian and narrow when isolated. Just as in life the technological pursuits reach out and affect society on all sides: so in the school corresponding studies need to be imbedded in a broad and deep matrix.

In the second place, as previously suggested, the explanation of the high school simplifies instead of complicates the college preparatory problem. This is because the college is going through an analogous evolution in the introduction of similar lines of work. It is expanding in technological and commercial directions. To be sure, the branch of fine and applied arts is still practically omitted; it is left to the tender mercies of over-specialized and more or less mercenary institutions—schools where these things are taught more or less as trades, and for the sake of making money. But the same influences which have already rescued medical and commercial education from similar conditions, and have brought to bear upon them the wider outlook and more expert method of the university, will in time make themselves also felt as regards the teaching of art.

Thirdly, the wider high school relieves many of the difficulties in the adequate treatment of the individual as an individual. It brings the individual into a wider sphere of contacts, and thus makes it possible to test him and his capacity more thoroughly. It makes it possible to get at and remedy his weak points by balancing more evenly the influences that play upon him. In my judgment many of the problems now dealt with under the general head of election *vs.* prescription can be got at more correctly and handled more efficiently from the standpoint of the elastic *vs.* the rigid curriculum—and elasticity can be had only where there is breadth. The need is not so much an

appeal to the untried and more or less capricious choice of the individual as for a region of opportunities large enough and balanced enough to meet the individual on his every side, and provide for him that which is necessary to arouse and direct.

Finally, the objection usually urged to the broader high school is, when rightly considered, the strongest argument for its existence. I mean the objection that the introduction of manual training and commercial studies is a cowardly surrender on the part of liberal culture of the training of the man as a man, to utilitarian demands for specialized adaptation to narrow callings. There is nothing in any one study or any one calling which makes it in and of itself low or meanly practical. It is all a question of its isolation or of its setting. It is not the mere syntactical structure or etymological content of the Latin language which has made it for centuries such an unrivaled educational instrument. There are dialects of semi-barbarous tribes which in intricacy of sentential structure and delicacy of relationship, are quite equal to Latin in this respect. It is the context of the Latin language, the wealth of association and suggestion belonging to it from its position in the history of human civilization that freight it with such meaning.

Now the callings that are represented by manual training and commercial studies are absolutely indispensable to human life. They afford the most permanent and persistent occupations of the great majority of human kind. They present man with his most perplexing problems; they stimulate him to the most strenuous putting forth of effort. To indict a whole nation were a grateful task compared with labeling such occupations as low or narrow—lacking in all that makes for training and culture. The professed and professional representative of “culture” may well hesitate to cast the first stone. It may be that it is nothing in these pursuits themselves which gives them utilitarian and materialistic quality, but rather the exclusive selfishness with which he has endeavored to hold on to and monopolize the fruits of the spirit.

And so with the corresponding studies in the high school. Isolated, they may be chargeable with the defects of which they are accused. But they are convicted in this respect only because they have first been condemned to isolation. As representatives of serious and permanent interest of humanity, they possess an intrinsic dignity which is the business of the educator to take an account of. To ignore them, to deny them a rightful position in the educational circle, is to maintain

within society that very cleft between so-called material and spiritual interests which it is the business of education to strive to overcome. These studies root themselves in science; they have their trunk in human history, and they flower in the worthiest and fairest forms of human service.

It is for these various reasons that I believe the introduction of the new problem of adjustment of studies will help instead of hinder the settlement of the older controversies. We have been trying for a long time to fix a curriculum upon a basis of certain vague and general educational ideals; information, utility, discipline, culture. I believe that much of our ill success has been due to the lack of any well-defined and controllable meaning attaching to these terms. The discussion remains necessarily in the region of mere opinion when the measuring rods are subject to change with the standpoint and wishes of the individual. Take any body of persons, however intelligent and however conscientious, and ask them to value and arrange studies from the standpoint of culture, discipline, and utility, and they will of necessity arrive at very different results, depending upon their own temperament and more or less accidental experience—and this none the less because of their intelligence and conscientiousness.

With the rounding out of the high school to meet all the needs of life, the standard changes. It ceases to be these vague abstractions. We get, relatively speaking, a scientific problem—that is a problem with definite data and definite methods of attack. We are no longer concerned with abstract appraisal of studies by the measuring rod of culture or discipline. Our problem is rather to study the typical necessities of social life, and the actual nature of the individual in his specific needs and capacities. Our task is on one hand to select and adjust the studies with reference to the nature of the individual thus discovered; and on the other hand to order and group them so that they shall most definitely and systematically represent the chief lines of social endeavor and social achievement.

Difficult as these problems may be in practice, they are yet inherently capable of solution. It is a definite problem, a scientific problem, to discover what the nature of the individual is and what his best growth calls for. It is a definite problem, a scientific problem, to discover the typical vocations of society, and to find out what groupings of studies will be the most likely instruments to subserve these vocations. To dissipate the clouds of opinion, to restrict the influence of abstract and conceited argument; to stimulate the spirit of inquiry



into actual fact, to further the control of the conduct of the school by the truths thus scientifically discovered—these are the benefits which we may anticipate with the advent of this problem of the wider high school.

At the conclusion of Professor Dewey's paper, the topic was discussed as follows:

1. From the standpoint of preparation for college, by Wayland J. Chase, of the Morgan Park Academy.

2. From the standpoint of administration, by George H. Rockwood, of the Austin High School.

3. From the social and moral standpoint, by William I. Crane, of the Steele High School, Dayton, Ohio.

4. From the standpoint of the Manual Training School, by Charles A. Bennett, of the Bradley Polytechnic Institute.

5. From the standpoint of the college, by Professor Nathaniel Butler.

The papers upon these topics are herewith presented in their order.

#### I. CURRENT PROBLEMS FROM THE STANDPOINT OF PREPARATION FOR COLLEGE

What constitutes preparation for college? Given time, any one of us can prepare a boy or girl to meet college-entrance requirements so far as subject-matter of these requirements is concerned. It is not ordinarily an easy task and it requires skill for its accomplishment. When it has been done, congratulating ourselves upon the completion of our work and complacently turning over the pupil to the college, we hold it thereafter responsible for the future welfare of the boy or girl. College is for the entering student the epitome of the world, a compact representation of life, and fitting for college therefore is fitting for life. Preparation for college should be as manifold as the demands that life at college makes upon mind, body, and character. Therefore, preparing a boy for college means, along with the furnishing him with an adequate stock of fundamental information, the training of the power to think straight and to do work well in certain prescribed lines, the securing for him as much physical vigor as heredity and other uncontrollable circumstances will permit, together with that knowledge of his physical self which is too commonly left for him to gather where and how he will, and to train in him the power of self-direction, self-control, and sense of personal responsibility. These are what the training of the secondary school should

seek to give, so that real fitness should be the product of our effort. How to do it, certainly constitutes a real current problem.

The shrewd Martin Dooley declares that "you can lead a boy to college, but you can't make him think," and in this witticism we can hear the public's declaration that we are not yet educating the boy adequately. The work of the college preparatory school has not been done till the boy has been taught to think independently and has acquired some degree of initiative in mental activity. To clear thinking with young people legible, neat and orderly presentation of written work conduces more than we are wont to recognize always in our class rooms; and as one step in the solution of the problem I would urge a greater insistence on those elements of form so highly prized in the business world, so frequently little heeded in the secondary school. College teachers not uncommonly scorn consideration of these elemental accomplishments, thinking that to the preparatory school attention to such things must be relegated and we of the secondary school commonly proceed as if we thought that the place to teach penmanship, and proper care in presentation of written work was in the grades and there only. The common charge against the college that the student is permitted, if not compelled by existing conditions of note-taking, to ruin his penmanship, may be transferred to the secondary school to the extent of this, that we at least accentuate rather than eliminate whatever weaknesses of these sorts the grammar pupil brings to us.

The relation that neatness and clearness bear to presentation of thought, thoroughness bears to thought processes and, aware as we all are of the essential value of this quality, we are yet prone to shrink from the drudgery that cultivation of it in our pupils imposes on us. No characteristic of college preparatory work stands higher than this in educational value. It is the parent of intellectual honesty, the defense against shallowness and incapacity and the sole and only proper foundation of scholarliness. In the pupil it is the product of the teacher's insistence in season and out of season on his understanding fully and learning exactly each fundamental portion. It means for the teacher the iteration and the reiteration of principles, the correcting and recorrecting of written work and calls for patience and thorough devotion to the teacher's calling. For the cultivation of clearness in thinking, for the testing of thoroughness of knowledge, as well as for training in accurate expression no class-room exercise has such value as the putting of the thought into writing. It is this that

makes the laboratory notebook an invaluable adjunct of science work, that gives to prose composition its great value in language work and that should make written work an important part of the drill of every class room. The experience of us all urges that this written work in order to foster origination and not imitation, the foe to thoroughness, should be done as frequently as possible in the class room and not outside.

It is but a short time ago that the development of the body of the student was no part of the school's or the teacher's responsibility. To the college first the gymnasium seemed essential, and now the secondary schools are concerning themselves increasingly with the physical part of education. And the impulse to this recognition is from without as well as from within the teacher's profession, from the parents as well as from the children. Unquestionably the wide-spread popularity of the military school among parents is based in part upon the belief that these schools can do much for the physical welfare of their sons ; and the public, which proclaims ever and anon against educational fads, when now it builds new high-school buildings, includes in the completeness of their equipment, as in the new Joliet Township High School, the outdoor gymnasium for the boys and the indoor gymnasium for the girls. For the greater furtherance of this physical welfare it is needful that boys and girls should be taught matters pertaining to their physical selves that now they learn often too well, but not wisely, from just those sources from which they should not have to learn them. On the fearsome ignorance of our boys of secondary-school age there are thriving in this city alone scores of charlatans whose advertisements appear everywhere, and whose fearful declarations work untold misery. Plain straight talks, preferably not as sermons and preferably from physicians, would set right hundreds of boys in every school community and make mightily for physical welfare if only in the direction of relieving unwarranted worry. To meet the objection that thus much might be revealed that it is best for boys and girls not to know if they can be kept from knowing, I would urge that exceedingly few arrive at the age of those who enter college without knowing them already in half and perniciously ignorant fashion. I would further urge that for most of the objections that suggest themselves remedies are not far to seek.

To prepare for the transition from school to college so that the passage from the restraints and loving protection of home or from the discipline of the boarding school to the larger freedom of college,

"from the sense of study as an obligation to the sense of study as an opportunity," shall not be attended with shipwreck is the third element of this problem of fitting for college. We all have seen that college instead of being the boy's supreme opportunity, as Dean Briggs has styled it, has been for some a period either of downright dissipation or of purposeless, listless drifting. We cannot honestly put all the responsibility for these failures on the college, for the college can properly look to us to send to it pupils already awakened to opportunity, already trained to stand alone and able to choose with a modicum of guidance between good and evil. The average eighteen years old boy just out of our schools is possessed of an overweening sense of his own importance and of his complete adequacy for all the experiences of life and therefore is in prime condition to be tripped by temptation. Moreover, because of but recently developed physical powers he is peculiarly exposed to temptation.

For this impending struggle with the world, the flesh and the devil it is the best school which best prepares him and which sends him out equipped with self-control and well-developed sense of responsibility to himself. Of course it is recognized that in study itself continued and wisely directed through four years there is moral as well as mental discipline, and that there is a mighty, saving grace in hard work. But how further to develop self-control and individual student responsibility is the question, and I suggest that they can be trained to a still further degree by gradually reducing the extraneous obligations of the pupil's school life as he nears the end of his course, substituting for some of the school's regular requirements the opportunity for self-direction. For instance, in one boys' school the seniors have a separate dormitory where rules respecting study-hours do not obtain, the members being self-regulating with reference to that and some of the less significant school requirements. And it would seem that application of this plan might find trial in day school in the direction of reducing teacher supervision of study-rooms and doubtless in other ways.

No features of school life are so helpful in this direction as the students' own interests, controlled and managed by themselves. Through the need which in them they see and feel of rules and regulations they get respect for law and organization and learn to identify the teachers' interests with their own. Admirably working to this same end are even the small concessions in school government which it has been found safe to make to the student body from time to time and which vary from monitor systems and student councils to more

ambitious attempts at self-government. In the aspirations of athletic students to win place and fame at college in the struggles of the campus we have a wholesome influence, making for abstinence and continence where other restraining considerations are lacking.

Too little do the advocates of free electives in the secondary school appreciate that in doing the distasteful task there is a disciplinary outcome whose value in character-making and in preparation for the struggles of later life is very great. To him that overcometh is the promise of power as truly in the secondary school as elsewhere and the failure of the overfond parent and the indulgent teacher to realize this is responsible for much of the weakness which we deplore in the college student. School is life as well as preparation for later life and the identification of these two elements in our thought of school problems is indispensable.

## 2. FROM THE STANDPOINT OF ADMINISTRATION

Mr. Rockwood said in part :

I propose to speak very briefly upon three of the points suggested in Professor Dewey's exhaustive syllabus.

The problems which I shall present are not new or startling ; they are simply to my mind, unsolved, and for that reason are set forward.

1. The adjustment of the secondary school to the grades. (I, 1, c of the syllabus.)

I quite agree with Professor Dewey that the next great movement in secondary education is to adjust itself to the work below. Let me speak of three factors that seem to enter into this problem.

(a) The gulf between elementary and secondary schools: Two breaks in our educational system have been much commented upon — the break between secondary school and college and the break between elementary and secondary school. Much has been done to bridge the former. Secondary schools and colleges no longer stand apart and throw stones at each other. By conferences such as this they have come to understand, each the other's aims and limitations, and to be mutually helpful. The gap between elementary and secondary school has never been so apparent, but, nevertheless, has been, and is real. The methods of administration and instruction in the high school and the grammar school differ widely. Very many young people find it difficult, impossible indeed, to adjust themselves to the change, and hence the large falling off in numbers during the first year. How shall this gap be bridged and so more of our young people be saved to

the larger outlook upon life that the secondary school gives? The building that houses the Austin High School houses also the seventh and eighth grades from four schools in the immediate vicinity. These grades are under the same supervision, and subject to the same methods of administration as the high school. The teachers work in departments and the instruction has the same vigorous tone as in the high school. Somewhat similar conditions prevail in three other high schools in Chicago. Nothing so knits together eighth and ninth grades as this close daily contact—good alike for grammar and high school.

(b) Mid-year classes: Promotions twice a year, class promotions at any time, individual promotions—these are plans familiar enough in the administration of elementary school affairs. High schools in many cities are admitting and graduating students twice a year. The plan was tried in Chicago twenty-five years ago and abandoned. It is on trial again. Difficulties of classification beset the plan. Not all elementary schools seem to be in sympathy. Doubtless it means smaller classes in the high school, more perplexities in the program, and a slightly increased expense *per capita*, but from a pedagogical standpoint where the highest good of the pupil is the only concern, mid-year classes are a wise provision.

(c) Departmental work: Are there any wise limitation upon departmental work especially in the first year of the secondary school? Shall the youth, fresh from the elementary school, meet as many different teachers as he takes subjects—a half dozen perhaps—or shall the same teacher give instruction in two or more related subjects—English and Latin and history, or mathematics and science? Most teachers wish but one subject that they may specialize. Specialists are not needed in the early years of the secondary school; sympathetic teachers are. I would limit, then, the departmental work in the secondary school. On the other hand, in the grammar school, I would increase the departmental work. The seventh and eighth grades call for scholarly effort on the part of the teacher. No one can do his best who must prepare the whole program. Introduce departmental work and at the same time ease the burden of the teacher and accustom the pupil to the methods of the high school.

2. The adjustment of the work to the individual. (III of the syllabus.)

(a) The responsibility of the elective course: There is no longer a rigid course of study anywhere. By parallel courses—classical, general, English, commercial—by partial electives, or by free electives,

choice in his work is presented to the secondary-school student. Responsibility for this choice rests somewhere. Shift it as we may upon the pupil himself, or his home, it still returns to the administration of the school and it becomes no small burden to advise this or that, when it is remembered how potent in all his future is the use of the student's time during the formative years of secondary-school life.

(b) What shall be done for the "pint cup" people? The curriculum of the secondary school is broad and comprehensive. To carry it with even a moderate degree of success takes first of all mentality and then patient application. A large number of young people come up through the grades with only indifferent success. Their motives are high; they are earnest and purposeful, but they have only small capacity and cannot shine in our classes. What shall be our policy? We must insist upon high standards of scholarship, and yet we wish to serve the largest number possible. The elective course of study helps wonderfully. Something may be found that will appeal strongly to a mind slow to move in the grooves where others move easily; more time may be taken to complete a given subject, and so the intellectual horizon of a small mind be greatly widened.

3. Liberty *vs.* license in school government. (IV, 2, of the syllabus.)

Young people in our secondary schools are at just the age when the idea of personal liberty is being strongly developed. We live in a time when this idea is prominent, not to say rampant. Elementary-school children for the most part yield readily enough to the somewhat military methods of discipline necessary in dealing with large numbers, if this discipline be firm and just. But methods must be modified in the high school, and personal responsibility be developed. In the last years various schemes of self-government have been devised, some of them eminently successful. But how to allow necessary and wise liberty in the administration of a school and not let that liberty become license is a great, and I think for most of us an unsolved, question.

It was recently said of one of the most conspicuous schoolmasters in Massachusetts that he is a "character builder." No higher compliment could be paid to the head of any school. Now, it is in the discipline and government of a school that opportunities for character building most present themselves. But character grows only when self-control is exercised. Give, then, to the youth of our secondary

schools the high privilege of developing character by such plans of organization that they shall be free from petty restrictions and inspired to do right for its own reward.

### 3. FROM THE SOCIAL AND MORAL STANDPOINT

I think it is best first to define my subject, so that I may know what I am talking about. "Current Problems in Secondary Education from the Social and Moral Point of View."

I will reverse the order of the two important words in my subject, social and moral, as it seems to me that the second, as stated in the subject, is a manifestation of the first. The social problem is that which deals with the manifestation of a moral nature in one's acts or deeds toward his fellow-man. The social nature is dynamic. It is morality put to practice.

All clubs, school organizations, and societies at last boil themselves down in their purpose to this fundamental of character building. If societies and clubs are "successfully" carried on, it does not necessarily follow that character is built; but, if character is successfully built, societies and clubs will be successfully carried on. So I prefer to discuss the fundamental, character building, about which so much has been said and written.

In spite of all that has been said and done concerning character building or development of moral character, it must be confessed that we have failed to attain the thing desired—such development of moral nature as should be evinced in true social life. It must be said that very little of our work has ended in achievement. And it becomes necessary, so it seems to me, before we try any more devices, to diagnose the case and look for the *cause* of our failures.

The real cause of our failure lies in the lamentable fact that the world in our time seems to have a vicious hankering after the new and startling. A new device, a new scheme, will cause the schools to drop their work and run after it like a child after a new toy, and thus they become only more bewildered and make the matter more complex. Under all complexity there exists an absolute simplicity. It is the reduction of all our devices, schemes, plans, clubs, and societies which constitute the complexity behind which lies the simplicity, that we want to find. We have begun at the wrong end of the problem. We have begun from without when we should have begun from within, and the ways in which we have plucked after leaves, instead of digging at the root, are many and various. I will classify and briefly describe them.



The first that I can remember was that style of moral teaching in which a student was supposed to become moral when he had committed to memory, generally without understanding, a lot of noble precepts like "there is no excellence without great labor." The children were taught to recite on certain days little poems in which they repeated good things children should be, and then offered themselves as a beautiful example, as in the following :

## WHAT I LOVE

I love to see a little girl  
Rise with the lark so bright ;  
Bathe, comb, and dress with cheerful face,  
Then thank the God of light.  
  
And, when she comes to meet mamma,  
So fresh, and neat, and clean,  
And asks a kiss from dear papa,  
With such a modest mien,  
  
That all who see her gentle look,  
And pretty actions too,  
Will feel that she's a darling child —  
Kind, honest, loving, true.  
  
These are the things I so much like ;  
And now, who'll try to be  
The meek and modest little girl  
Which you before you see ?

This moral training was so absolutely contrary to human nature that it only resulted in the development of a lot of cheerful little liars.

And then came the old-style college moral training in which a pious, old, white-haired doctor of divinity taught the boys moral philosophy *intellectually*, thinking that when the boys were able to pass a good examination upon what the books said about morals, they would certainly be moral men. Such training never got within telescopic view of the suburbs of real morality. The old professor's work would be amusing if it were not pathetic.

And then came the more modern cry of certain religionists "for the teaching of morals in the public schools," which they want done by reading the Scriptures on every possible occasion, and so the children repeat the Lord's Prayer, mouthing the sacred words "Thy kingdom come," without the slightest conception of what the expression

means; and such moral training also comes to naught, except in helping the child toward his failure to realize that he is not moral, and to be satisfied that he has done his moral duty when he has read some Scripture and said his prayers.

And then came that remarkable device known as the "pupil government scheme," wherein, to get rid of the pupil's fear of the teacher, the promoter substitutes the fear of his fellow-pupil. The purpose of the pupil government scheme seems to me to be the production of order, in order to relieve the teacher rather than to develop the child. If order is morality, then we should imitate the lock-step of the penitentiary. The pupil government scheme is one of the many fathers of fear, and therefore a grandfather of many vices. This thing will fall like all other schemes and devices in which the moving power is fear or restraint. I believe in pupil government, but on a purely individual basis. The scheme which implies officers of justice will surely fail.

These things will not do. The true idea, the fundamental idea of moral training is very old and very simple. It was taught by Confucius, by Buddha, by Christ, and by Paul. In our application of this method to the development of morality in the public schools, we have failed signally. The pupils have no moral selfhood; their morality all the time depends upon others; it is not self-centered. They have to be watched, and in a majority of cases a teacher dare not leave his class room for fear a pandemonium council will take the place of his so-called "order."

The trouble is that we have not gone at the thing philosophically. In the correct doing of anything on the face of the earth, there are four steps which are absolutely essential:

1. The formation of a definite and correct purpose.
2. The determination of the steps necessary for the attainment of the purpose.
3. The means necessary for the taking of the steps for the attainment of the purpose.
4. The application of the means in order that the steps may be taken so that the purpose may be attained.

And we have been in such a hurry to teach morality by the get-rich-quick plan that we have been unwilling to study our purpose, our steps, and our means before we began the application of the means. We have applied unknown means in order to take undetermined steps in order to attain a vague, shadowy, and indefinite purpose.

This will be promptly denied. We say we have a purpose, and that this purpose is character building, or the development of the highest morality. Yes, we have said this, but we have not stopped to consider what is character or morality. We have made out no specifications of our task.

What is character? Character is the sum of the characteristics which would fit a man to live completely. What are these characteristics which should be our specific aims? Christ gives us some of them in the Sermon on the Mount, when he says we should be merciful, we should be peacemakers, we should be meek, we should hunger and thirst after righteousness or the quality of being and doing right. We all know that before we can ever correct the present state of things, which cry aloud for correction, we must change the *hearts* of men; that when we have implanted in men the king-becoming graces that Christ, Paul, Shakespeare have laid down for us, the public abuses of today and the private wrongs of today will be corrected incidentally. They cannot be corrected permanently from outside the hearts of men. Therefore, our problem is to lay aside all devices and get at the heart of things by a studied and determined attempt in the public schools to develop in the hearts of the children the king-becoming graces. We must work from within, and not from without.

The task is not half so difficult as it seems. It is in no wise hopeless, for it can be clearly shown that all men, good and bad, love and admire the king-becoming graces, whenever any man exhibits them. A criminal will go into ecstasies about every noble hero in a cheap novel; and he will hate the villain worse than you and I; and a crowd of people of the lowest stage of morality will stand up for hours in a cheap theater in an ecstasy of enthusiasm over the generous hero of the play, and they will hate the villain of the play more fiercely than you and I. The trouble exists in the fact that in all the methods of the past—the precept method, the Scripture method, the “moral philosophy intellectually method,” etc.—we have failed in inducing men to transform their ideals over into deeds. There is nothing in all this world that is of value to man except as it refers back to human life. Our past teaching has not done this. This is illustrated by a case that occurred to me personally a few months ago. One Sunday morning I was passing by a church to which there was attached a pretty lawn, the property of the church. As my walk led me in front of the church, I heard the congregation piously intoning the Lord’s Prayer; and at the moment of my passing they came to the beautiful words, “Forgive

us our trespasses as we forgive them that trespass against us." The last words brought me to the corner of the church and in sight of the lawn, on which I was astounded to see a large tin sign bearing the inscription: "Trespassers on this lawn will be prosecuted." So little did the people who were repeating the Lord's Prayer realize what they were saying that they were actually praying for the Lord to prosecute them. And this is a sample of the way in which our adoration of the Deity has led us to forget the transformation of sacred precepts into living deeds among our fellow-men. This awful error impels me to pray with Abou Ben Adhem, "I pray thee then write me as one that loves his fellow-man."

All children love the heroes who have been good and noble. Only, they seem never to have realized that these heroes were good and noble simply because they possessed the king-becoming graces; and secondly, that those king-becoming graces are still attainable. They practice prospection, retrospection, dextrospection, sinistrospection, neighborspection, and all sorts of spection except introspection, and so my first aim is to get my pupils to realize that what makes men admirable and grow is that they possess the king-becoming graces; secondly, to get them to take these king-becoming graces—go home and sit down before a paper containing the list, and then look within to determine whether their daily deeds show that they possess the king-becoming graces. They soon come to realize their short-comings, and with it comes an earnest wish to be, and this is the beginning of morality.

And then he must be made to realize that law which teaches us that there is no way to attain the king-becoming graces but by going through processes *in them*. No one can learn to love his fellow-man without loving his fellow-man. No one can acquire self-control without self-controlling. No one can become habitually merciful without daily practicing mercy. And all devices and all "get-rich-quick" schemes must fail. I might say, to paraphrase Paul, that whether there be precepts, they shall fail; whether there be pupil government schemes, they shall cease; whether there be Scripture readings, they shall vanish away, and that the only way to get children to become moral is by inducing them, not forcing them, to strive *to be* moral.

How shall we do this? I tried to show in the June number, 1901, of the SCHOOL REVIEW, the details of how this thing is to be done. Limitation of time forbids me to repeat it. But the only means to create in the heart of a child a wish to attain the king-becoming

graces that make man moral and thus lead him to a true and noble social life, is persuasion, of which Socrates said :

But I think that young men who exercise their understanding, and expect to become capable of teaching their fellow-citizens what is for their interests, grow by no means addicted to violence, knowing that on violence attend enmity and danger, but that by persuasion the same results are attained without peril, and with good will ; for those who are compelled by us, hate us as if despoiled of something, while those who are persuaded by us, love us as if they had received a favor. It is not the part, therefore, of those who cultivate the intellect to use violence ; for to adopt such a course belongs to those who possess brute force without intellect. Besides, he who would venture to use force has need of no small number of allies ; but he who can succeed with persuasion has need of none, for, though left alone, he will think himself still able to persuade.

And in closing this brief paper, I hope it will be understood that, if I have failed to deny a thing, I do not, in any wise affirm it nor imply it ; and *vice versa*, if I have failed to affirm certain things, I hope it will be understood that I have in no wise denied them.

#### 4. FROM THE STANDPOINT OF MANUAL TRAINING

The questions which I have been asked to discuss this morning seem to cluster around, or grow out of the familiar proposition, that the chief function of the secondary school is to help pupils to discover themselves. It is not, we say, of greatest importance that the high-school graduate on commencement day shall know the contents of a certain number of books or have power to do a certain number of specific things, but that he shall have discovered the pathway which leads to the field of activity which he is best endowed by nature to work in. He may not have observed the windings or the end of the pathway or the breadth of the field, but he should be reasonably certain as to the general direction in which it lies and have already turned his face that way.

If this is the chief or even one of the chief functions of secondary education, then it follows that the high school must afford a wide range of opportunity through a variety of studies and occupations. Indeed it must insist upon each pupil having a rich and varied course. Especially is this true for the first two years or more ; otherwise, how can a pupil be sure to discover himself ? How can he discover that he was meant to serve in any particular one of the great divisions of human activity until he has tried such activity or at least has obtained some knowledge of its rudimentary forms ?

To afford such opportunity as is here suggested, the school must have a course of study which is both broad and rich, covering not merely language and mathematics, but history, science, and industry as well. The course must not be dried up in one part and juicy in another, but juicy and tempting throughout.

One of the chief obstacles in the way of realizing the full measure of results from this great function of secondary education, is the establishment of specialized high schools in our larger cities. Such action affects not only the larger cities themselves, but the smaller ones also which try to copy after them. When there has been established in a given city a Latin high school and an English high school and a manual-training high school, the resulting grouping of studies for these several schools materially narrows the opportunities of the individual pupils in each one of them. Or, if there is no narrowing because there was never greater breadth, we observe that whereas formerly, or under other conditions, each individual was given all the opportunities the city afforded, now has only a fraction of them. Unless it can be proven that sufficient opportunity to discover aptitude is given during the several grades of the elementary schools and that the pupil is developed enough to make intelligent use of this opportunity—which would be very difficult to prove—then the plan of having specialized high schools works against the realization of the highest ideals in secondary-school work.

The question then arises, is it not possible to organize high schools which shall bring together the opportunities of all of the special schools in a single organic whole? When this question is answered in the affirmative and a satisfactory plan for such a school has been outlined, then we shall see more clearly the form and framework of a superior type of high school for small cities and towns which shall be the same in kind, though not in degree, as the school in the largest city.

So far as the development of separate Latin and English high schools is concerned, only a small section of country has been affected—the extreme East; but the manual-training high school, born in the West and quickly copied in the East and encouraged by private gifts, has affected secondary-school work in large cities throughout the entire country. The popularity of these schools has been so marked that there is not a shadow of doubt that they have met a demand which is just as real in the small city as in the large, and one which will be just as great in the next generation as in the present one. Though housed in inferior buildings, as in Philadelphia, Brooklyn, and Chi-

cago, they have been overcrowded with students, and are daily accomplishing what was once deemed impossible, namely, giving students the benefit of a large amount of work in manual training and drawing, and at the end of four years, sending them to college or to business with superior preparation. As would be expected, there have been some misfits in individual cases, and the wisest of the principals of these schools have constantly reduced the number of such by broadening the course of instruction until in some of these schools the student may study Latin, and in nearly all of them, German and French, under conditions about as favorable as in high schools of the older type. Under such conditions, the new school encroaches upon the territory of the old, and really becomes a general high school in which emphasis is placed upon manual training.

Now that the great value of manual training has come to be recognized in secondary schools, why should not all pupils have the benefit of it? Since the manual-training high school has so fully demonstrated its efficiency and, in its best form, has come to be a broad general school with emphasis on manual training, why should not another step forward be taken by removing that emphasis, or better, by emphasizing each of the particular lines of work to the same degree? Then, when considered from the point of view of our initial proposition, we should have a high school of a higher type than is common today. In certain manual-training high schools there seems to be a lack of proper balance of opportunity due to an over-emphasis upon some of the more technical branches of manual training. This technical work would not seem to be so excessive if it were balanced by equally specialized work in several other directions—in language, literature, applied science and art. The danger lies not so much in offering too much in any one line as in failing to keep a proper breadth and balance of opportunity and in neglecting to study the needs of the individual students. If under given conditions, the manual-training high school as it is usually constituted today presents too large a proportion of manual training to balance other subjects, prune it down, if you cannot increase the other subjects to the same proportion.

This suggests the thought that, once having in mind this typical high school in which are combined all that is best in the Latin, the English, and the manual-training high school, the way is open for adapting this school to cities and towns of various sizes. In doing this, we must deal with cross sections, as it were, instead of longitudinal sections of the courses in the typical school, reducing or enlarging to

suit the size and wealth of the community. Thus the very large town or small city would have a high school which includes in its course something in each of the fundamental lines of study represented in the typical school for the large city of which we have been speaking, but none of these lines would be represented in so rich and varied a manner. For instance, Latin might be taught, but not Greek; German, but not French; geometry, but not trigonometry; biology, but not physiography; freehand and mechanical drawing, but not architectural drawing and machine design; woodworking and metalworking, but not pattern making and machine construction; the arts of the household, but not technical millinery or tailoring. Manual training would be given as much of a representation as the sciences. Woodworking, metalworking, the domestic arts and drawing would balance chemistry, biology and domestic science.

To be more specific with reference to manual training and drawing, every township high school should have a room equipped for wood-working, one for drawing and another for household arts. Under some conditions, two rooms instead of three would be sufficient. The high school of a city from 30,000 to 100,000 inhabitants should have a room for woodworking equipped for bench work and wood-turning; another for working cold metals such as filing and fitting, bent-iron work, hand-tool turning and sheet-metal work, including metal-spinning; a third room, of smaller size, should be the connecting link between manual training and physics, and be supplied with a few machine tools, a forge, and tools and apparatus for electrical construction and testing. In connection with each of these rooms there should be a stock and tool room and a wash room. One large room should be provided for needle work, dressmaking and the study of textiles, and two for drawing—perhaps one for freehand and the other for mechanical. Domestic science should be classed with science studies, and as such, be provided with a laboratory. Such an equipment as this, though much smaller than that of the average manual-training high school, under the direction of a teacher who sought to bring together art and handicraft, science and construction, in fact unity in the entire school work, would yield remarkable results. A high school for a large wealthy city like Chicago or Cleveland or Boston should contain in addition to what has already been mentioned, rooms for forging, foundry work, machine tool work, also extra space for drawing and art work, including the household arts, and for household science—in short, about such an equipment as is now found in the



best manual-training high schools. Such a school would be of large size, and only a fraction of the students would take the maximum amount of work in manual training. It would, however, if properly balanced, be richer in opportunity than any public high school with which I am acquainted. On the other hand, such a high school need not involve the expenditure of any more money than is now being expended on high-school buildings in some of our largest cities.

Coming back again to one of the thoughts already touched upon, the best results from a high school of this type, whether in magnified or miniature form, can be obtained only when every pupil is required to do a certain minimum of work in each of the fundamental lines of effort before he is allowed to choose his course or group of studies. In other words, before he is allowed to choose definitely his group of studies, he must have taken work in English, one foreign language, mathematics, science, history, drawing and manual training. Very few options should be allowed during the first two years. After the pupil has spent a reasonable length of time on each of the fundamental lines of study, he is in a far better condition to make an intelligent choice than he possibly could have been, had any one of these been omitted. There may be exceptions due to peculiar conditions, but this is the general rule. The kind of a high school then which I would advocate as best fitted to meet the usual conditions in secondary-school work, is not a manual-training high school, or a Latin high school, or an English high school, but a broad general high school covering the fundamental lines of instruction usually given in all these various schools, and carrying each line as far as local conditions make it possible and desirable, but keeping a breadth and balance of opportunity which is not possible in a school with a meager course of study, or in a school that is highly specialized.

#### FROM THE STANDPOINT OF THE COLLEGE

Professor Butler spoke in part as follows :

Common opinion that secondary schools are merely to meet the demands of the college. Colleges charge their shortcomings to failures and defects in the secondary system. In an important sense, problems of the secondary school must be solved primarily in light of a sound psychology rather than in light of preparation for college or a preparation for life.

The primary aim of secondary education is not preparation for college. The aim of secondary education is suitable preparation for the

period of adolescence; it is liberal education for adolescence. The emphasis must be upon the individual not upon his means for making a living. It is the work of the secondary school, not to make a specialist, but to make a man who may become a specialist.

This period of adolescence demands studies that call gradually into play his developing faculties. They must increase in difficulty and they must begin to satisfy his desires to understand and see reasons and relations. The nature of secondary education is determined by the nature of *things*, not by nature of college requirements.

### III. THE DEPARTMENT CONFERENCES

In accordance with established customs the general conference resolved itself into departmental conferences for the afternoon sessions. The proceedings of these conferences are here given:

#### THE BIOLOGICAL DEPARTMENTAL CONFERENCE

was opened, Associate Professor C. B. Davenport in the chair, by a paper by Mr. H. N. Whitford on "Physiography and Botany."

There is an intimate relation between topography and distribution of plants. In order to show this any definite physiographic unit may be selected. Such a unit is found in a sand spit near the biological laboratory situated at the head of Cold Spring Harbor, Long Island. The spit stretches some 2,000 feet into the water, dividing the harbor into outer and inner parts connected by a narrow channel through which the tide runs.

The inner side of the spit shows definite plant societies. Between high and low tides a greater part of the area is occupied by the large salt reed grass (*Spartina polystachya*). Nearer the limits of high tide narrow zones of the glasswort (*Salicornia*) and sea-lavender (*Statice*) are found. Where the topography is more level and only slightly covered by water at high tide the rush salt grass (*Spartina juncea*) predominates. Again there are patches of no vegetation near the limits of high tide. A greater part of the spit that stands above high tide is covered with the sand-reed (*Ammophila arundinacea*). On the outer side of the spit just above the limits of high tide is a narrow zone in which scattering specimens of the saltwort (*Salsola kali*) and sea-rocket (*Cakile Americana*) are present. The region between high and low tide is barren of vegetation except near the low tide limit where *Ulva* grows attached to